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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,539	02/07/2002	Naoharu Yanagawa	PU01-01165	7834
21254	7590	09/20/2004	EXAMINER	
MCGINN & GIBB, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			PATEL, GAUTAM	
			ART UNIT	PAPER NUMBER
			2655	

DATE MAILED: 09/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/067,539	Applicant(s) YANAGAWA ET AL.	
	Examiner Gautam R. Patel	Art Unit 2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,9-13,16-19 and 25 is/are rejected.
- 7) ☒ Claim(s) 4-8,14,15 and 20-24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date # <u>5</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

1. Claims 1-25 are pending for the examination.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. § 119(a)-(d), which papers have been placed of record in the file.

Specification

3. The disclosure is objected for following reasons.

The title of the invention is neither precise nor descriptive. A new title is required which should include, using twenty words or fewer, claimed features that differentiate the invention from the Prior Art. It is recommended that the title should reflect the gist of or the improvement of the present invention.

Correction is required.

OBJECTION to CLAIMS

4. claims 3-8 and 19-24 are objected.

Claim 3 discloses "a reference signal". It is not clear how this signal is different from the reference signal already defined in claim 1.

Claim 19 has the same problem.

NOTE: For examination purposes both signal are considered as same.

Correction or explanation is required.

Claim Rejections - 35 U.S.C. § 112

5. The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 4-8 and 20-24 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4, line 11 the scope of " the plurality of variable gain amplifiers " lacks proper antecedent basis.

Claim 20 has the same problem.

Claim Rejections - 35 U.S.C. § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 9-12, 16-19 and 25 are rejected under 35 U.S.C. § 102(b) as being anticipated by Rees et al., US. patent 4,998,234 (hereafter Rees).

As to claim 1, Rees discloses the invention as claimed [see Figs. 4-7, especially 4-5] including an optical pickup, adjusting means, and synthesizing means, comprising:

an optical pickup [fig. 4] having a plurality of light receiving planes for receiving a light beam returning from an optical disc when a reading beam of light is radiated to the optical disc, and for producing a plurality of signals [col. 5, lines 31-43 & col. 6, lines 3-16];

adjusting means [fig. 5, units 120, 122, 124, 126, 116 & 118] for adjusting signal levels of the plurality of signals such that each of the signal levels of the plurality of signals becomes equal to a reference level determined from at least one of the signal levels of the plurality of signals [col. 6, lines 3-59]; and

synthesizing means [fig. 5, units 128, 130, 132 & 134] for synthesizing the plurality of signals after the signal levels of the plurality of signals are adjusted by the adjusting means to obtain a synthesized [signal LOG AD/BC] signal [col. 6, line 3 to col. 7, line 2].

7. The aforementioned claim 2, recites the following elements, inter alia, disclosed in Rees:

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the reference level is a signal level of one of the plurality of signals, and the adjusting means adjusts signal levels of others of the plurality of signals such that each of the signal levels of the others of the plurality of signals becomes equal to the signal level of the one of the plurality of signals [col. 6, line 3 to col. 7, line 2].

8. The aforementioned claim 3, recites the following elements, inter alia, disclosed in Rees:

a relay circuit [fig. 5, units 116 & 118] for producing a reference level signal [output of 118] representing the signal level of the one of the plurality of signals, and directly transferring the one of the plurality of signals to the synthesizing means; and

a plurality of amplifying relay circuits [fig. 5, units 108, 110, 112 & 114] for producing subordinate level signals representing the signal levels of the others of the plurality of signals respectively, adjusting the signal levels of the others of the plurality of signals such that each of the subordinate level signals becomes equal to the reference level signal, and supplying the others of the plurality of signals having the adjusted signal levels to the synthesizing means [col. 6, line 3 to col. 7, line 2].

9. The aforementioned claim 9, recites the following elements, inter alia, disclosed in Rees:

the reference level is an average of signal levels of at least two of the plurality of signals [col. 6, lines 33-52].

10. As to claims 10-11, they are method claims corresponding to claims 1-2 respectively and they are therefore rejected for the similar reasons set forth in the rejection of claims 1-2 respectively, supra.

11. The aforementioned claim 12, recites the following elements, inter alia, disclosed in Rees:

the sub-step of using a peak level of the one of the plurality of signals as the reference level signal [col. 6, line 3 to col. 7, line 2].

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12. As to claims 17-19, they are method claims corresponding to claims 1-3 respectively and they are therefore rejected for the similar reasons set forth in the rejection of claims 1-3 respectively, supra.

13. As to claims 16 and 25, they are method claims corresponding to claim 9 and they are therefore rejected for the similar reasons set forth in the rejection of claim 9, supra.

Claim Rejections - 35 U.S.C. § 103

14. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

~~(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.~~

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 13 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Rees as applied to claims 1-3, 9-12, 16-19 and 25 above.

Regarding claim 13, although Rees does not specifically disclose only passing the a high frequency portion of each of the plurality of signals to the extent claimed. Rees teaches that filtering of signals is part of his system for example see fig. 5, unit 118. The limitations in claim 13 does not define a patentable distinct invention over that in Rees since both the invention as a whole and Rees are directed to processing the signal from different portions of the photo-detectors and creating a reference level for comparison. The type of filter [a band-pass filter] before or after certain step presents no new or unexpected results, so long as the signal is processed properly and unwanted [high or low] frequency component is taken out in a successful way. If one has more

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high frequency noise one uses high pass filter if one has more low frequency noise one use low pass filter. Therefore, to have high pass filter before step C in the optical pickup would have been routine experimentation and optimization in the absence of criticality.

Allowable Subject Matter

15. Claims 4-8, 14-15 and 20-24 are objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. This is subject to overcoming 112 second rejection and objection to claims.

NOTE: Claims 4-8, 14-15 and 20-24 are allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose a signal synthesizing apparatus which includes an adjusting means which includes a relay circuit which includes "a plurality of second peak detection circuits and a plurality of variable gain amplifiers and creating plurality of difference signals". It is noted that the closest prior art, Rees shows a similar apparatus which has all of the above circuits including relay circuit. However Rees fails to disclose a plurality of second peak detection circuits and a plurality of variable gain amplifiers and creating plurality of difference signals.

Other prior art cited

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Suda et al. (US. Patent 4,980,773) "In focus detecting ..".
- b. Takahashi et al. (US. patent 5,339,302) "RF signal compensated ..".

NOTE: Takahashi discloses both amplifiers 5 & 10 using same signal from PD1 as a reference signal.

- c. Cornsweet (US. patent 3,832,066) "Apparatus and method ..."
- d. Yanagisawa et al. (US. patent 6,563,773) "Tracking control apparatus ..".
- e. Masakado (US. patent 6,424,609) "Output control ...".

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- f. Koyama (US. patent 5,293,569) "Magneto-optical recording ...".

Contact Information

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is (703) 308-7940. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2650) where this application or proceeding is assigned is (703) 872-9314.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To can be reached on (703) 305-4827.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4700 or the group Customer Service section whose telephone number is (703) 306-0377.



Gautam R. Patel
Primary Examiner
Group Art Unit 2655

GAUTAM R. PATEL
PRIMARY EXAMINER

September 15, 2004